ABSTRACT OF THE DISCLOSURE:

An in-vehicle load drive-control circuit including a power MOSFET between connected in series between a load and a power source, said power MOSFET on/off controlling the power supply to said load, said power MOSFET incorporating a thermoelectric element across which the voltage drops as a result of heat liberation when the power MOSFET is energized; and a control unit for ON/OFF controlling a gate driving signal to said power MOSFET on the basis of a voltage drop. After the voltage has been stabilized, the gate driving signal is made constant. In this configuration, the breakage of the MOSFET resulting from excess current can be inhibited in a simple structure.